

**REMARKS**

Claims 1-10 and 12-14 are pending in this application. In this response, Applicants have amended claims 1-3 and 13. The claims have been amended to more clearly describe the invention and no new matter has been added by these amendments. In addition, Applicants have cancelled claim 10. Additionally, Applicants request that the Examiner consider rejoining claims 5-9 as they depend on allowable claims 1 and 2. Therefore, Applicants respectfully request consideration and examination of this application and the timely allowance of the pending claims.

**I. Claims 1 and 2**

**A. Indefiniteness Rejection to Claims 1 and 2**

The Examiner has rejected claims 1 and 2 under 35 U.S.C. § 112 as being indefinite. Allegedly, the Examiner asserts that it was not clear whether the claims were directed to a primer consisting of the indicated sequences (SEQ ID NO: 1 and 2) or a primer which amplifies such sequences. Therefore, Applicants amended the claims by incorporating two commas. The amended claims, claims 1 and 2, clearly recite primers consisting of the two sequences. Applicants request that the Examiner withdraw this rejection.

**B. Novelty Rejection to Claims 1 and 2 over *Brennan***

The Examiner rejected claims 1 and 2 under 35 U.S.C. § 102(b), as allegedly being anticipated by *Brennan* (US Patent 5,474,796). Again, Applicants' addition of the commas to claims 1 and 2 ensure that these claims clearly recite primers consisting of SEQ ID NO: 1 and 2. Since both indicated sequences have a length of 22 nucleotides,

as shown in the sequence listing, *Brennan* cannot anticipate these sequences with its significantly shorter 10 mer nucleic acid sequences. Applicants request that the Examiner withdraw this rejection.

## **II. Claim 10**

### **A. Claim 10 as possible duplicate of Claim 2**

The Examiner alleges claim 10 has potentially identical scope with claim 2 and further suggested the cancellation of this claim. As a result, Applicants have cancelled claim 10 without prejudice to the subject matter of claim 10.

### **B. Indefiniteness and Written Description Rejection to Claim 10**

The Examiner rejected claim 10 because it is unclear whether the claim is directed to a primer consisting of SEQ ID NO: 2 or a primer which amplifies SEQ ID NO: 2. Furthermore, the Examiner alleged that if the latter is true, the specification fails to provide any guidance as to which sequences would amplify SEQ ID NO: 2. As previously mentioned, and without acquiescing to the rejection or disclaiming any subject matter, Applicants obviate these rejections by cancelling claim 10.

## **III. Claim 3 and 13**

### **A. Utility Rejection to Claim 3**

The Examiner rejected claim 3 under 35 U.S.C. § 101, allegedly because the claim is directed to non-statutory subject matter. Specifically, Examiner asserted that the "groEL2 gene fragment" may occur in nature, and is therefore unpatentable.

In response, Applicants added the term “isolated” to claim 3 to indicate the hand of the inventor, thus being man-made. Applicants request that the Examiner withdraw this rejection.

**B. Indefiniteness Rejection to “fragment” Claim 3**

The Examiner rejected claim 3 under 35 U.S.C. § 112, second paragraph, as being indefinite. In particular, Examiner alleged that the double use of the term “fragment” renders the claim unclear.

In response, Applicants deleted the phrase “or fragment thereof” to recite the term fragment only once. Applicants believe that this amendment clarifies that the contemplated polynucleotides consist of the full length sequences of any of the SEQ ID NOs: 3 to 42. Therefore, Applicants request that the Examiner withdraw this rejection.

**C. Written Description Rejection to “derived” in Claims 3 and 13**

The Examiner rejected claims 3 and 13 under 35 U.S.C. § 112, first paragraph, as lacking written description support in the specification. Examiner alleged that claim 3 and 13, which recite isolated groEL2 gene fragment derived from *Streptomyces* species or a potato scab pathogenic microorganism, are not supported by the specification.

In response, Applicants deleted the objected-to term “derived.” Additionally, Applicants have amended claims 3 and 13 to recite that the isolated groEL2 gene fragment consists of any of the recited SEQ ID NOs. Applicants request that the Examiner withdraw this rejection.

**D. Indefiniteness Rejection to “chosen from” in Claims 3 and 13**

The Examiner rejected claims 3 and 13 under 35 U.S.C. § 112 as being indefinite. Specifically, Examiner asserted the term “chosen from” is inappropriate Markush language.

While Applicants maintain that the “chosen from” language is proper, Applicants amended claims 3 and 13 by replacing “chosen from” with “selected from the group consisting of,” in an effort to facilitate prosecution. Applicants request that the Examiner withdraw the rejection.

**E. Novelty Rejection to Claims 3 and 13**

**1. Anticipation by *Brennan***

The Examiner rejected claims 3 and 13 under 35 U.S.C. § 102(b) as allegedly being anticipated by *Brennan* (US Patent 5,474,796). Allegedly, because of the term “chosen from,” Examiner construed claims 3 and 13 to cover sequences from within the indicated SEQ ID NO: 3-42 and 44-61. In addition, Examiner asserted that the partial sequences from within the SEQ ID NOs are anticipated by *Brennan*, which teaches all possible 10 mer nucleic acid sequences.

In response, Applicants amended claims 3 and 13 by replacing “chosen from” with “selected from the group consisting of,” and the groEL2 gene fragment contemplated comprise the full length of any of SEQ ID NO: 3-42 and 44-61. Furthermore, Applicants argue that since SEQ ID NO: 3-42 and 44-61 are at least 420

nucleotides in length, *Brennan* cannot anticipate these sequences with its 10 mer nucleotides. Applicants request that the Examiner withdraw this rejection.

## **2. Anticipation by Genebank Accession M76658**

In addition, the Examiner rejected claims 3 and 13 under 35 U.S.C. § 102(b) as anticipated by Genebank Accession number M76658 (1993). M76658 is a groEL2 gene from *Streptomyces albus*, and was considered by the Examiner as “derived” from the SEQ ID NOs recited in claims 3 and 13. As the term “derived” in Claims 3 and 13 has been deleted and the M76658 does not read on any of SEQ ID NOs: 1-61, this accession number cannot anticipate these claims. Therefore, Applicants request that the Examiner withdraw this rejection.

## **IV. Rejoining Claims 5-9**

The Examiner withdrew claims 5-9 as directed to a non elected invention. In response, Applicants request that the Examiner consider rejoining claims 5-9 as they depend on allowable claims 1 and 2. Applicants argue that if claims 1 and 2 are allowed, method claims 5-9 should be rejoined for using patentable subject matter. See M.P.E.P. § 821.04(b).

## **V. Conclusion**

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

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Please grant any extensions of time required to enter this response and charge  
any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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